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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,580	12/17/2003	Tatsuhiko Ema	04329.2677-01	4483

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EXAMINER
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TADESSE, YEWEBDAR T

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/736,580

Applicant(s)

EMA ET AL.

Examiner

Yewebdar T. Tadesse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Tateyama et al (US 5,965,200). As to claim 17, Tateyama et al discloses (see Figs 2-3) a film forming apparatus comprising a dispenser nozzle (solution supply nozzle 22) arranged to face a target substrate to be processed so as to supply a chemical solution (developing solution capable of including a solid component and a solvent in vapor and liquid form) to the target substrate (G); a suction nozzle (23) arranged to face the target substrate and considered to be capable of selectively sucking a solvent vapor on a liquid film formed on the target substrate by the supply of a chemical solution from the dispenser nozzle (22), a first moving section for relatively moving the target substrate and the dispenser (moving mechanism 25 for moving dispenser nozzle 22, and spin chuck 21 moving the substrate, relatively moving to each other); and a second moving section for relatively moving the target substrate and the suction nozzle (moving mechanism 25 for moving the suction nozzle 23 and spin chuck 21 moving the substrate, relatively moving to each other). With respect to claim 18, Tateyama et al discloses (see Fig 7) a supply nozzle (gas getting nozzle 45) for supplying a flow of gas to the liquid film formed on the target substrate.

3. Claims 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 04-181143. As to claim 17, JP'143 discloses (see Fig 1 and English translated Abstract) a specimen recovering apparatus capable of forming a film comprising a dispenser nozzle (vapor and water nozzles 3 and 5 respectively) arranged to face a target substrate to be processed so as to supply a chemical solution (reaction solution capable of including a solid component and a solvent in vapor and liquid form) to the target substrate (11); a suction nozzle (2) arranged to face the target substrate and considered to be capable of selectively sucking a solvent vapor (reaction solution including vapor) on a liquid film formed on the target substrate by the supply of a chemical solution from the dispenser nozzle (vapor and water nozzles 3 and 5 respectively), a first moving section for relatively moving the target substrate and the dispenser (rocking and rotating stage moving the substrate relative to the nozzles 3 and 5); and a second moving section for relatively moving the target substrate and the suction nozzle (suction nozzle moving from point B to an A point relative to the substrate). With respect to claim 18, JP'143 discloses (see Fig 1 and English translated Abstract) a supply nozzle (nitrogen gas bubbling nozzle 4a) for supplying a flow of gas to the liquid film formed on the target substrate.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tateyama et al (US 5,965,200) as applied to claim 1 above, and further in view of Tanaka et al (US 6,692,165). Tateyama et al discloses (see Fig 4 and column 6, lines 36-40) that the length of the head suction nozzle is the same as the width of the substrate. However, the length of the suction port of the suction nozzle larger than the diameter of the substrate is not taught in Tateyama et al. Tanaka et al discloses (see Fig 8 and column 12, lines 57-65) the longitudinal suction width L (210 mm) nozzle 41 larger than the diameter of the substrate (8 in =203.2 mm). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a suction port of a suction nozzle having a length larger than the diameter of the substrate in

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Tateyama et al as to fully apply suction force by completely covering the face of the substrate.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ito (US 6,410,080) teaches a liquid or chemical solution supplied to the substrate including a solvent and solid component (see column 10, lines 53-56).

### ***Response to Arguments***

8. Applicant's arguments filed 06/23/2005 have been fully considered but they are not persuasive. Applicants argue that Tateyama et al's does not teach a suction nozzle selectively sucking a solvent vapor. Examiner disagrees. Structurally, both Tateyama et al and JP'143 are capable of selectively sucking a solvent vapor. By appropriately positioning the suction nozzle relative to the substrate and adjusting the suction power, Tateyama et al's and JP'143 suction devices are capable of selectively sucking a solvent vapor on a liquid film formed on the substrate. The amendments to claim 17 do not add any structural limitation to the claimed invention. They are intended use. All the claimed limitations are met by Tateyama et al, JP'143 and Tanaka et al as shown in the rejections above. As to the argument that Tateyama et al and JP'143 fail to teach a dispensing nozzle and a suction nozzle arranged to face the substrate, a moving mechanism is taught in both references that is considered to move each nozzle so as to face the substrate.

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yewebdar T. Tadesse whose telephone number is (571) 272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM-4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
YTT

  
**CHRIS FIORILLA**  
**SUPERVISORY PATENT EXAMINER**  
*AU 1734*